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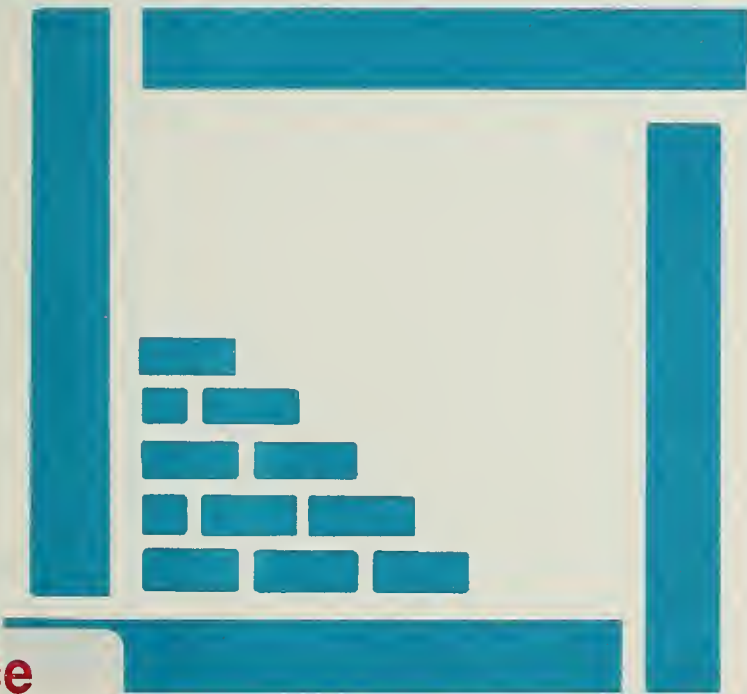
Census of Construction Industries

CC87-I-16

INDUSTRY SERIES

Carpentry Work Special Trade Contractors

Industry 1751



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ACKNOWLEDGMENTS

Many persons participated in the various activities of the 1987 Census of Construction Industries.

The overall planning and review of the census operations were performed by the staff of the Office of the Assistant Director for Economic and Agriculture Censuses.

This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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If you have any questions concerning the statistics in this report, call (301) 763-7546.

1987

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Issued January 1990



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PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan

areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property

into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.¹ This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

Contract construction—The SIC manual defines construction in three broad types of activity that follow:

1. **Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
2. **Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
3. **Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

Employer Companies

Developing the sampling frame for employer companies—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

Selecting the employer sample—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan

area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

Estimation procedures for 1987 and 1982 data—

Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \sum_{i=1}^{n_c} x_i / p_i$$

where: x'_c is the simple unbiased estimate of a characteristic for a publication cell.

x_i is the reported value of a characteristic for an individual establishment in the publication cell.

p_i is the selection probability of that firm.

n_c is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

Reliability of employer statistics—Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.

CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.

To discuss a special tabulation before submitting specifications, call 301-763-7546.

COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

- * Sampling error exceeds 40 percent.
- ** Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
- Represents zero.
- † Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
- †† Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
- (D) Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
- (W) Greater than zero but less than 1 percent.
- (X) Not applicable.
- n.s.k. Not specified by kind.

Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction ¹	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment	3					
End of year—total	1, 3	1	5	6		
End of year—buildings, machinery and equipment	3					
Depreciation charges during year—buildings, machinery and equipment	3					
Capital expenditures:						
Total capital expenditures	1, 3	1	5	6		
New buildings—machinery and equipment	3					
Used buildings—machinery and equipment	3					
Communication services, costs for	2					
Employees:						
All employees—average number	1, 2	1	5	6		8
Construction workers—average number	1, 2, 9	1, 9				
Other employees—average number	2					
Employer costs for fringe benefits—legally required and voluntary expenditures	2					
Establishments—number in business during year	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total	1, 2, 9	1, 9	5	6		
Quarterly	2, 9	9				
Inventories	4					
Materials, components, supplies, and fuels—costs for	1, 2	1	5	6		
Payroll:						
First quarter, all employees	2					
Annual:						
All employees	1, 2	1	5	6		8
Construction workers	1, 2	1				
Other employees	2					
Power, fuels, and lubricants—costs for	2					
Proprietors and working partners	2					
Ratios, State	13	13				
Value and receipts:						
Dollar value of business done, total	2		5	6	11	
Value of construction work, total	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others	2					
Other business receipts and land receipts ²	2					
Net value of construction work	1, 2	1	5	6		8
Value added	1, 2	1	5	6		8
Rental costs:						
Total	1, 2	1	5	6		
For machinery and equipment	2					
For buildings	2					
Repairs to buildings and other structures	2					
Repairs to machinery and equipment	2					
Selected industry ratios	12					
Subcontract work to others, costs for	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

¹Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

²Land receipts are shown separately for SIC's 1531 and 6552 only.

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Carpentry Work Special Trade Contractors

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SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in carpentry work and the installation of prefabricated windows and doors (except revolving doors). Ship joinery contractors are also included in this industry. Establishments primarily engaged in building custom cabinets for individuals in a ship are classified in Retail Trade, industry 5712. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$11.5 billion in total dollar value of business. Of this amount, \$11.2 billion were for the value of construction work. These establishments paid out \$4.0 billion for materials, components, and supplies and \$1.2 billion for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$172 million. Value added for 1987 was \$6.1 billion.

There were 36,009 establishments with total employment averaging 190,431 during the year. Total payroll for 1987 was \$3.3 billion. Total hours worked by construction workers during the year were 253 million hours.

Larger establishments with 20 employees or more, while representing only 4 percent of the total number of

employer establishments in this industry accounted for 39 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.

Figure 1. **Value of Construction Work by Type of Construction**

(Percent)

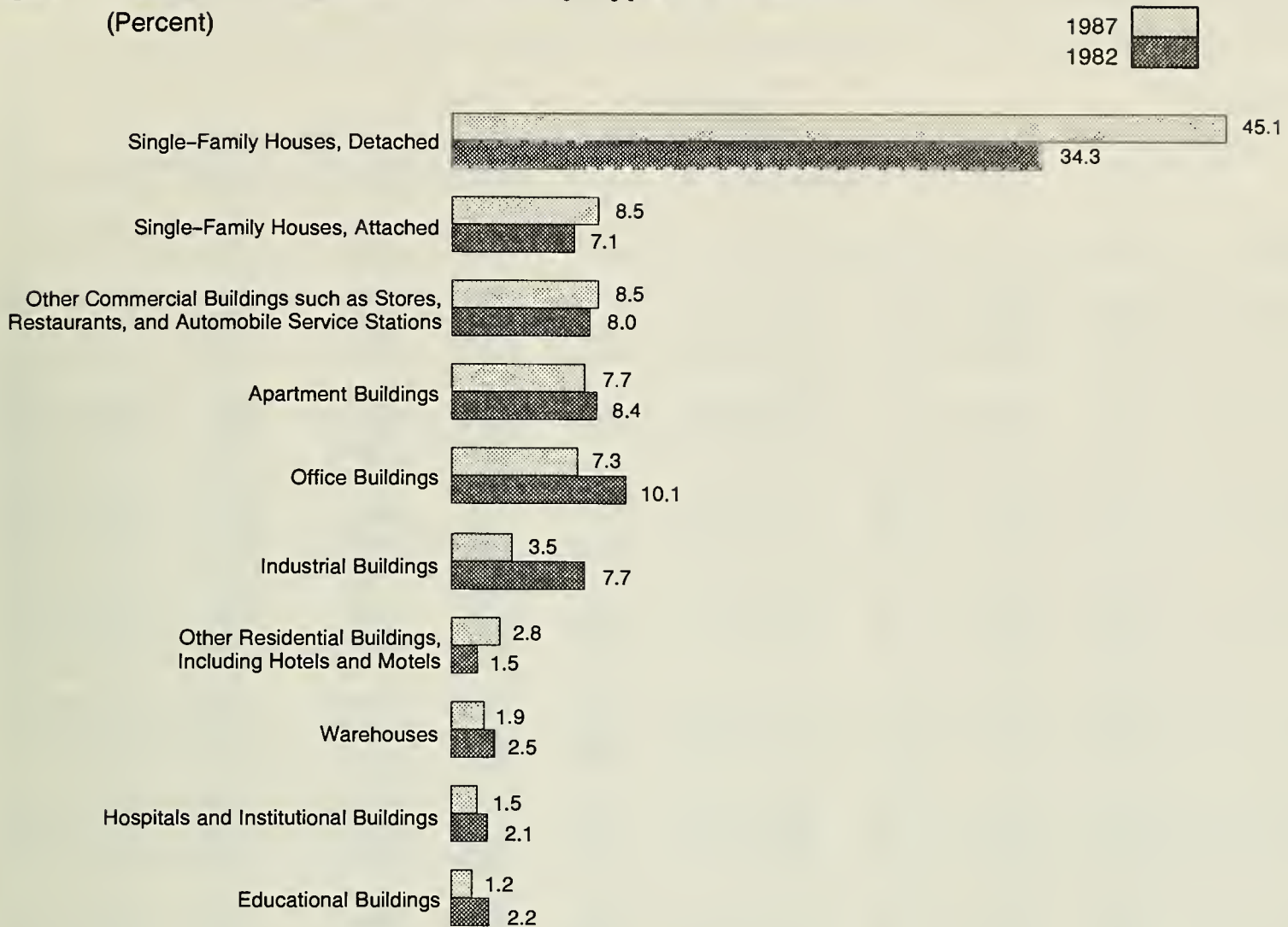


Figure 2. **Selected Costs Per Dollar Value of Business Done**

(Percent)

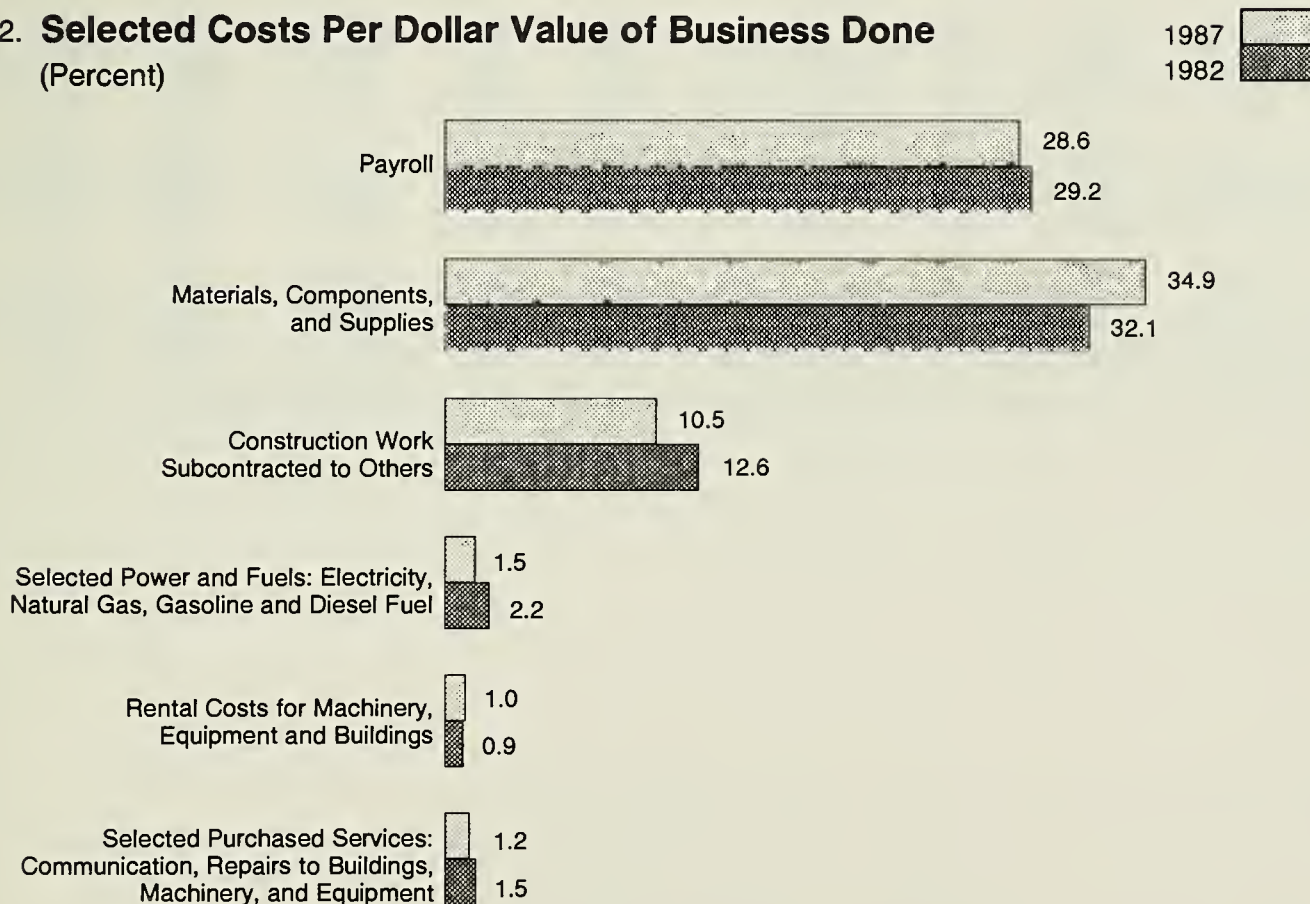


Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	1987							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work†
		All	Construction workers	All employees	Construction workers			
A	B	C	D	E	F	G	H	
United States	36 009	190 431	164 191	3 272 194	2 609 930	252 984	11 243 863	10 038 947
Alabama	381	1 144	983	13 027	10 662	1 624	42 502	38 593
Alaska	49	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Arizona	487	5 254	4 514	102 875	78 697	7 286	354 896	334 957
Arkansas	213	643	581	6 544	5 429	974	24 313	21 436
California	2 836	33 297	29 230	661 061	532 242	42 181	2 282 195	2 109 600
Colorado	559	2 195	1 794	31 027	23 122	2 570	155 316	130 312
Connecticut	1 075	4 923	4 178	87 746	67 560	7 027	291 112	252 256
Delaware	94	437	378	6 599	5 141	566	24 293	20 138
District of Columbia	11	106	93	1 813	1 366	133	4 621	3 461
Florida	2 043	10 700	9 320	161 591	127 752	15 185	531 014	480 427
Georgia	787	7 477	6 813	56 330	43 519	6 895	173 535	158 083
Hawaii	75	509	436	12 617	9 871	621	42 634	37 119
Idaho	106	297	253	3 439	2 977	473	16 062	15 059
Illinois	1 532	11 316	9 768	258 584	208 008	15 535	820 248	737 080
Indiana	760	3 262	2 727	45 419	36 033	4 375	165 516	144 649
Iowa	369	1 049	865	13 500	10 707	1 333	67 038	59 014
Kansas	341	1 430	1 238	20 018	16 314	1 702	64 190	57 121
Kentucky	351	1 362	1 193	18 343	15 695	1 942	60 702	55 598
Louisiana	244	877	684	12 886	9 088	1 016	58 373	52 864
Maine	481	1 628	1 452	22 229	19 557	2 483	101 329	87 696
Maryland	953	6 050	5 081	103 855	81 157	8 775	303 481	262 316
Massachusetts	1 672	6 703	5 774	119 798	96 416	9 455	440 947	375 166
Michigan	1 177	6 736	5 755	129 994	107 131	9 401	404 709	370 761
Minnesota	709	3 637	3 090	63 209	50 954	5 016	198 200	174 967
Mississippi	238	723	621	8 013	6 612	1 104	27 141	25 232
Missouri	736	4 298	3 708	82 306	67 841	5 850	231 853	212 541
Montana	165	455	389	6 314	4 965	534	37 326	25 886
Nebraska	250	874	711	11 138	8 477	1 161	47 319	43 866
Nevada	152	1 683	1 511	27 171	23 358	2 245	97 627	91 295
New Hampshire	555	1 916	1 607	29 323	23 741	2 219	100 491	87 284
New Jersey	1 971	7 873	6 711	150 768	118 886	10 382	525 130	456 278
New Mexico	102	419	365	4 980	3 470	511	17 146	14 511
New York	3 119	14 433	12 375	303 684	230 011	20 270	973 950	860 297
North Carolina	1 228	4 442	3 861	56 494	47 742	5 412	203 491	181 565
North Dakota	139	387	333	3 276	2 901	462	19 577	17 725
Ohio	1 385	6 433	5 478	103 787	83 049	8 785	366 700	323 556
Oklahoma	222	844	699	11 942	9 116	1 022	44 787	38 578
Oregon	338	1 206	984	16 639	13 410	1 427	59 322	54 174
Pennsylvania	1 938	8 455	7 232	134 970	109 721	11 909	502 227	424 461
Rhode Island	289	1 093	950	20 181	15 667	1 546	81 351	70 054
South Carolina	461	1 878	1 662	22 700	19 196	2 726	82 365	73 725
South Dakota	129	386	355	3 827	3 507	657	21 980	18 775
Tennessee	489	2 410	2 132	31 676	26 999	3 595	118 990	106 973
Texas	1 511	6 169	5 190	88 615	71 100	7 684	344 575	302 927
Utah	174	600	513	8 072	6 960	801	36 597	32 161
Vermont	224	766	670	10 440	9 275	1 179	52 509	40 469
Virginia	1 197	5 962	5 167	90 811	71 678	8 084	289 388	258 072
Washington	694	2 501	2 062	41 655	30 779	2 622	143 591	129 241
West Virginia	136	398	361	5 902	5 119	586	18 513	17 557
Wisconsin	795	2 567	2 157	41 986	34 441	3 409	163 947	144 656
Wyoming	44	(S)	(S)	(S)	(S)	(S)	(S)	(S)

†In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1987—Con.						1982			Relative standard error of estimate (percent) for column—			Location of establishment
Value added††	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees**	Total construction receipts¹	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
6 077 619	4 169 640	1 204 915	112 598	147 868	854 789	132 543	5 451 191	2 928 660	1	1	3	U.S.
23 135	16 303	3 909	267	334	2 478	1 056	30 495	16 510	10	12	23	AL
(S)	(S)	(S)	(S)	(S)	(S)	299	22 746	13 591	(S)	(S)	(S)	AK
174 374	167 450	19 938	4 627	3 493	34 651	3 438	132 198	63 042	4	3	13	AZ
13 241	8 283	2 877	212	*421	1 591	456	14 120	7 383	25	16	55	AR
1 236 429	901 964	172 594	31 753	20 523	103 905	13 608	687 034	372 182	2	2	6	CA
66 603	66 833	25 004	1 934	922	15 958	3 270	119 139	62 728	8	12	22	CO
160 913	98 589	38 855	2 554	4 355	24 972	2 477	97 612	54 588	5	5	13	CT
13 823	7 059	4 155	164	*375	1 697	410	17 231	8 310	11	9	59	DE
2 266	1 195	1 160	33	5	24	116	5 309	2 108	(W)	(W)	35	DC
287 369	203 582	50 586	6 195	7 755	42 377	8 000	253 616	141 731	3	3	11	FL
97 090	64 023	15 451	2 450	3 029	13 293	2 826	86 083	43 521	3	7	18	GA
22 003	15 340	5 515	363	402	2 711	495	43 207	19 738	13	13	32	HI
8 757	6 323	1 003	*329	(S)	*3 176	334	12 835	7 095	27	27	(S)	ID
462 223	282 358	83 167	5 382	7 551	55 748	6 521	338 596	181 554	2	2	10	IL
90 457	58 324	20 866	1 065	3 382	14 141	2 107	68 329	35 151	8	9	26	IN
35 049	25 931	8 023	717	1 122	11 544	1 823	65 302	33 366	9	10	28	IA
37 731	21 747	7 068	410	1 125	6 840	894	31 107	16 503	9	8	29	KS
35 563	22 105	5 104	493	702	3 532	1 448	50 320	30 511	9	10	22	KY
32 420	21 039	5 509	488	381	*4 787	3 928	154 325	109 171	11	14	34	LA
53 604	(D)	13 633	332	2 643	11 784	912	34 684	16 573	6	8	23	ME
173 118	96 607	41 164	2 887	4 710	24 618	3 644	145 483	82 930	4	4	13	MD
228 119	159 479	65 781	4 076	9 712	35 243	3 562	157 674	82 060	4	4	14	MA
221 256	153 090	33 948	2 922	5 901	32 456	3 170	155 481	79 539	3	4	12	MI
107 419	72 591	23 232	2 065	3 132	14 766	2 524	112 147	56 723	7	5	16	MN
15 103	10 229	1 909	233	287	2 118	830	22 485	11 733	16	16	23	MS
129 783	87 274	19 312	2 114	2 801	19 012	2 788	116 522	64 688	5	6	15	MO
16 548	9 511	11 439	114	92	6 071	545	25 090	11 714	10	9	18	MT
22 736	23 352	3 453	401	603	8 058	948	38 050	19 859	11	14	25	NE
49 597	42 576	6 331	1 170	747	5 159	729	39 103	22 717	5	7	19	NV
54 041	34 153	13 206	698	2 805	11 431	1 037	31 230	16 114	6	7	19	NH
291 625	173 807	68 852	5 116	8 127	38 820	4 911	231 847	127 121	3	3	11	NJ
6 523	11 090	2 635	*535	*336	2 154	760	28 639	11 901	17	12	52	NM
537 670	347 137	113 652	7 403	13 173	65 469	10 232	486 477	265 773	2	3	8	NY
114 013	70 095	21 925	1 603	2 861	15 995	2 999	81 006	40 293	6	9	17	NC
9 589	9 343	1 851	*110	228	4 485	363	10 818	6 474	18	21	35	ND
194 829	140 547	43 144	2 565	4 701	26 474	4 250	196 012	102 392	4	4	14	OH
25 168	(D)	6 209	297	193	5 858	2 292	80 439	45 332	9	8	25	OK
35 517	19 003	5 147	739	1 192	5 898	885	32 533	17 097	9	9	28	OR
252 606	180 935	77 766	5 093	6 956	45 820	5 965	241 702	126 485	4	4	14	PA
44 877	27 738	11 297	562	1 691	6 550	415	16 172	8 325	8	11	21	RI
48 313	25 770	8 640	656	1 261	5 722	1 366	47 935	21 976	9	10	32	SC
10 840	7 992	*3 205	57	*342	2 568	422	15 098	7 609	28	28	60	SD
72 316	43 470	12 017	1 342	2 244	13 016	1 693	53 418	27 447	9	12	27	TN
190 006	117 441	41 648	2 494	3 310	33 352	11 275	405 415	220 083	5	8	12	TX
18 700	14 221	4 436	*494	*192	2 403	725	22 061	11 766	15	18	66	UT
20 530	20 013	12 040	228	796	7 189	431	16 920	8 000	14	17	31	VT
151 165	109 404	31 315	3 790	6 083	28 204	3 531	141 343	79 973	5	5	14	VA
85 452	48 559	14 350	1 411	1 672	11 237	2 068	74 868	36 311	6	6	21	WA
10 341	7 284	955	118	391	*2 557	544	17 590	9 024	12	16	34	WV
81 410	65 493	19 290	1 308	2 404	15 443	2 819	123 533	63 902	6	6	20	WI
(S)	(D)	(S)	(S)	(S)	(S)	388	19 800	7 923	(S)	(S)	(S)	WY

Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent)			
					1987	1982	1977	1972
Number of establishments in business during year	36 009	30 765	24 388	23 524	1	1	2	2
Proprietors and working partners	11 375	16 004	18 248	19 515	2	2	2	3
All employees**	190 431	132 543	124 646	123 910	1	1	1	2
Construction workers:								
March	152 637	105 446	97 894	100 191	1	1	1	2
May	166 772	114 294	118 957	114 628	1	1	1	2
August	176 368	119 639	125 303	123 613	1	1	1	2
November	161 054	113 756	116 177	114 069	1	1	2	2
Average	164 191	116 973	114 673	115 464	1	1	1	2
Other employees:								
March	27 228	15 476	9 446	7 977	1	2	2	3
May	25 925	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
August	26 406	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
November	25 347	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Average	26 240	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Construction worker hours (thousands):								
January to March	56 433	36 131	(NA)	(NA)	1	2	(NA)	(NA)
April to June	63 953	40 147	(NA)	(NA)	1	1	(NA)	(NA)
July to September	69 202	42 171	(NA)	(NA)	1	1	(NA)	(NA)
October to December	63 393	40 215	(NA)	(NA)	1	1	(NA)	(NA)
Total hours worked	252 984	158 666	(NA)	(NA)	1	1	(NA)	(NA)
Payroll, all employees	3 272 194	1 612 024	1 202 203	925 144	1	1	1	2
Payroll, construction workers	2 609 930	1 352 248	1 060 885	842 225	1	1	1	2
Payroll, other employees	882 284	259 776	141 619	82 919	1	1	1	2
First quarter payroll, all employees	731 050	344 748	236 201	(NA)	1	1	1	(NA)
Employer costs for fringe benefits, all employees	890 431	300 748	238 285	(NA)	1	1	1	(NA)
Legally required expenditures	548 087	236 524	142 821	(NA)	1	1	1	(NA)
Voluntary expenditures	142 343	85 223	93 844	(NA)	1	2	1	(NA)
Dollar value of business done	11 452 175	5 512 195	3 648 984	2 355 521	1	1	1	2
Value of construction work ¹	11 243 863	5 451 191	3 597 222	2 329 145	1	1	1	2
Value of construction work subcontracted in from others	4 964 753	2 070 197	2 188 387	1 279 447	1	1	1	2
Land receipts ²	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts	208 312	61 004	49 762	26 376	4	4	3	4
Net value of construction work†	10 038 947	4 758 524	3 328 382	2 128 203	1	1	1	2
Value added††	6 077 619	2 928 660	2 083 098	1 504 984	1	1	1	2
Selected costs	5 374 556	2 583 534	1 563 887	850 537	1	1	1	2
Materials, components, and supplies ³	3 997 519	1 771 595	1 231 073	649 595	1	1	1	2
Construction work subcontracted to others	1 204 915	692 666	268 840	200 942	2	1	3	3
Selected power, fuels, and lubricants	172 121	119 272	63 974	(NA)	1	1	1	(NA)
Electricity	26 963	17 495	6 460	(NA)	3	2	2	(NA)
Natural gas	5 481	4 388	2 277	(NA)	4	5	4	(NA)
Gasoline and diesel fuel	129 077	87 840	47 040	(NA)	1	2	1	(NA)
On highway use	118 997	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
Off highway use	10 080	(NA)	(NA)	(NA)	3	(NA)	(NA)	(NA)
Other, including lubricating oils and greases	10 599	9 547	8 198	(NA)	4	3	3	(NA)
Rental cost for machinery, equipment, and buildings	112 598	51 042	24 895	(NA)	2	2	2	(NA)
For machinery and equipment	50 416	26 801	16 588	11 232	2	2	2	11
For buildings	62 182	24 240	8 307	(NA)	2	3	2	(NA)
Selected purchased services	143 197	82 040	54 519	(NA)	1	2	2	(NA)
Communication services	60 704	36 404	20 432	(NA)	2	2	2	(NA)
Repairs to buildings and other structures	8 086	4 523	3 717	(NA)	5	5	16	(NA)
Repairs to machinery and equipment	74 405	41 113	30 370	(NA)	2	2	2	(NA)
Ownership of construction projects:								
Value of construction work ¹	11 243 863	5 451 191	3 597 222	2 329 145	1	1	1	2
Government owned	641 582	460 375	121 532	162 702	5	7	3	4
Federal	217 125	(NA)	(NA)	(NA)	7	(NA)	(NA)	(NA)
State and local	424 456	(NA)	(NA)	(NA)	6	(NA)	(NA)	(NA)
Privately owned	10 602 280	4 990 815	3 475 690	2 166 443	1	1	1	2

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

³For 1972, includes data for power, fuels, and lubricants.

Table 3. Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent)	
			1987	1982
BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT				
Beginning-of-year gross book value of depreciable assets	742 321	622 138	2	2
Capital expenditures, other than land	147 868	74 472	3	3
New	122 729	57 156	3	3
Used	25 139	17 316	6	5
Retirements and disposition of depreciable assets	35 401	21 882	6	8
End-of-year gross book value of depreciable assets	854 789	674 728	2	1
Depreciation charges during year	117 077	99 806	2	2
Buildings and other Structures, Additions, and Related Facilities				
Beginning-of-year gross book value of depreciable assets	200 411	163 227	5	3
Capital expenditures, other than land	15 115	8 421	7	8
New buildings and other structures	11 433	5 840	8	8
Used buildings and other structures	3 681	2 580	13	17
Retirements and disposition of depreciable assets	6 200	3 114	24	29
End-of-year gross book value of depreciable assets	209 326	168 534	5	3
Depreciation charges during year	16 946	13 585	6	5
Machinery and Equipment				
Beginning-of-year gross book value of depreciable assets	541 910	458 910	2	2
Capital expenditures, other than land	132 753	88 051	3	3
New machinery and equipment, including automobiles and trucks	111 298	51 315	3	3
New automobiles and trucks, intended primarily for highway use	74 838	31 204	4	5
Used machinery and equipment, including automobiles and trucks	21 457	14 735	8	5
Retirements and disposition of depreciable assets	29 200	18 788	6	8
End-of-year gross book value of depreciable assets	645 463	506 194	2	2
Depreciation charges during year	100 130	86 220	2	2

Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
All establishments:		
Number	36 009	1
Value of construction work	11 243 863	1
Establishments with inventories:		
Number	7 489	3
Value of construction work	4 386 994	2
Inventories ¹ :		
End of 1987, materials and supplies	223 637	3
End of 1986, materials and supplies	195 172	4
Establishments with no inventories:		
Number	22 051	1
Value of construction work	4 719 969	2
Establishments not reporting:		
Number	6 469	3
Value of construction work	2 136 900	3

¹Inventories at cost or market prior to any adjustment to correct to LIFO values.

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of—									1,000 employees or more
		1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees		
1987											
Number of establishments -----	36 009	(S)	6 296	2 417	1 042	226	95	23	2	1	
All employees** -----	190 431	(S)	39 572	31 084	30 890	15 382	13 752	7 560	5 291	(D)	
Payroll, all employees -----	3 272 194	(S)	613 665	559 943	623 204	329 378	328 871	149 364	36 053	(D)	
Construction worker hours (thousands) -----	252 984	(S)	52 641	41 163	41 374	20 890	19 570	10 451	4 049	(D)	
Dollar value of business done -----	11 452 175	(S)	2 148 192	1 970 832	1 986 206	987 177	1 038 596	419 470	87 077	(D)	
Value of construction work [†] -----	11 243 863	(S)	2 112 674	1 924 152	1 940 869	969 269	1 035 173	496 989	(D)	(D)	
Net value of construction work† -----	10 038 947	(S)	1 860 305	1 700 834	1 741 772	881 957	990 857	467 524	(D)	(D)	
Value added†† -----	6 077 619	(S)	1 133 113	1 033 878	1 081 388	534 454	573 230	236 167	49 686	(D)	
Cost of materials, components, supplies, and fuels -----	4 169 640	(S)	762 709	713 635	705 720	365 410	421 050	191 229	(D)	(D)	
Cost of construction work subcontracted to others -----	1 204 915	(S)	252 369	223 318	199 097	87 312	44 316	29 465	(D)	(D)	
Rental cost for machinery, equipment, and buildings -----	112 598	(S)	21 944	22 097	23 575	10 237	10 566	4 130	459	(D)	
Capital expenditures, other than land -----	147 868	(S)	37 138	23 462	21 495	6 086	5 849	4 074	(D)	(D)	
End-of-year gross book value of depreciable assets -----	854 789	(S)	220 082	139 974	128 279	44 200	36 198	22 341	(D)	(D)	
1982											
All employees** -----	132 543	45 747	28 554	22 666	18 996	7 640	4 583	4 356	(D)	(D)	
Total construction receipts [†] -----	5 451 191	1 697 044	1 112 781	1 019 835	876 596	381 734	173 987	189 213	(D)	(D)	
Value added†† -----	2 928 660	885 769	593 980	538 179	458 597	213 785	106 831	131 517	(D)	(D)	
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees** -----	1	(S)	3	3	3	1	(W)	(W)	(W)	(D)	
Net value of construction work† -----	1	(S)	3	3	2	(W)	(W)	(W)	(D)	(D)	
Capital expenditures, other than land -----	3	(S)	7	6	4	7	11	(W)	(D)	(D)	

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

[†]In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done									
		Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$2,499,999	\$2,500,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 or more
1987											
Number of establishments -----	36 009	(S)	(S)	(S)	(S)	4 306	2 419	1 393	391	148	77
All employees** -----	190 431	(S)	(S)	(S)	(S)	26 938	26 020	27 645	16 420	11 225	19 476
Payroll, all employees -----	3 272 194	(S)	(S)	(S)	(S)	418 571	463 968	568 072	371 514	287 418	392 984
Construction worker hours (thousands) -----	252 984	(S)	(S)	(S)	(S)	37 177	36 212	35 442	22 862	15 363	24 001
Dollar value of business done -----	11 452 175	(S)	(S)	(S)	(S)	1 486 891	1 679 638	2 083 321	1 325 987	1 006 936	1 378 770
Value of construction work ¹ -----	11 243 863	(S)	(S)	(S)	(S)	1 463 042	1 639 839	2 024 900	1 295 037	994 405	1 365 731
Net value of construction work† -----	10 038 947	(S)	(S)	(S)	(S)	1 275 983	1 420 442	1 774 474	1 151 765	895 233	1 280 882
Value added†† -----	6 077 619	(S)	(S)	(S)	(S)	773 319	841 698	1 082 408	684 593	519 849	741 913
Cost of materials, components, supplies, and fuels -----	4 169 640	(S)	(S)	(S)	(S)	526 513	618 543	750 486	498 121	387 915	552 008
Cost of construction work subcontracted to others -----	1 204 915	(S)	(S)	(S)	(S)	187 058	219 396	250 426	143 272	99 171	84 849
Rental cost for machinery, equipment, and buildings -----	112 598	(S)	(S)	(S)	(S)	15 944	18 936	21 837	15 002	10 154	13 394
Capital expenditures, other than land -----	147 868	(S)	(S)	(S)	(S)	23 919	23 787	24 123	10 014	7 232	7 497
End-of-year gross book value of depreciable assets -----	854 789	(S)	(S)	(S)	(S)	156 415	121 068	136 391	73 462	40 212	48 870
1982											
All employees** -----	132 543	7 381	9 747	20 160	31 098	17 759	15 862	14 348	8 466	3 769	3 951
Total construction receipts ¹ -----	5 451 191	71 244	194 324	550 909	1 109 449	816 930	789 188	865 299	563 822	255 523	234 501
Value added†† -----	2 928 660	35 815	112 053	318 570	593 121	429 153	424 540	449 283	288 474	121 180	156 469
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees** -----	1	(S)	(S)	(S)	(S)	3	3	2	3	2	(W)
Net value of construction work† -----	1	(S)	(S)	(S)	(S)	3	3	3	3	3	(W)
Capital expenditures, other than land -----	3	(S)	(S)	(S)	(S)	7	8	8	4	9	(W)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work ¹				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction ²	Maintenance and repair				
	A	B	C	D	A	B	C	D
1987								
Value of construction work ¹	11 243 863	6 820 191	2 499 876	1 039 789	1	1	2	2
Building construction	10 231 221	6 740 789	2 466 508	1 023 924	1	1	2	2
Single-family houses	6 024 429	4 252 215	1 255 364	516 849	1	1	2	3
Single-family houses, detached	5 068 844	3 480 365	1 138 829	449 649	1	1	3	3
Single-family houses, attached	955 584	771 850	116 534	67 199	2	2	5	8
Apartment buildings with two or more apartments	867 966	683 530	111 951	72 485	2	3	7	6
Other residential buildings, including hotels and motels	319 275	179 792	109 697	29 785	4	4	8	8
Hotels and motels	124 156	79 055	37 753	7 347	5	5	12	11
Other residential buildings, excluding hotels and motels	195 118	100 737	71 943	22 437	5	5	11	9
Office buildings	815 411	436 397	303 085	75 927	3	3	4	3
Other commercial buildings such as stores, restaurants, and automobile service stations	953 797	535 519	282 951	135 326	3	4	4	4
Industrial buildings and warehouses	603 072	360 017	128 794	114 261	2	3	5	5
Industrial buildings	394 922	221 839	93 233	79 849	3	3	6	5
Warehouses	208 149	138 177	35 560	34 411	3	3	10	7
Educational buildings	140 430	55 835	74 013	10 582	6	8	9	10
Hospitals and institutional buildings	168 239	71 376	80 303	16 559	5	8	6	11
Other nonresidential buildings	338 602	166 108	120 350	52 150	11	15	16	17
Nonbuilding construction	128 635	79 402	33 368	15 865	8	9	23	8
Construction work, n.s.k.	884 005	(NA)	(NA)	(NA)	5	(NA)	(NA)	(NA)
1982								
Value of construction work ¹	5 451 191	4 062 243	(NA)	1 388 947	1	1	(NA)	2
Building construction	4 767 231	3 516 310	(NA)	1 250 921	1	1	(NA)	1
Single-family houses	2 260 572	1 706 536	(NA)	554 035	1	1	(NA)	3
Single-family houses, detached	1 871 341	1 380 322	(NA)	491 019	2	2	(NA)	2
Single-family houses, attached	389 230	326 214	(NA)	63 016	2	3	(NA)	5
Apartment buildings with two or more apartments	457 623	370 852	(NA)	86 770	3	3	(NA)	6
Other residential buildings, including hotels and motels	81 688	63 164	(NA)	18 524	4	5	(NA)	5
Hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other residential buildings, excluding hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Office buildings	549 463	413 649	(NA)	135 814	2	2	(NA)	5
Other commercial buildings such as stores, restaurants, and automobile service stations	437 547	327 365	(NA)	110 182	2	3	(NA)	4
Industrial buildings and warehouses	555 725	343 759	(NA)	211 966	2	2	(NA)	2
Industrial buildings	420 391	241 992	(NA)	178 399	2	3	(NA)	3
Warehouses	135 334	101 767	(NA)	33 567	3	3	(NA)	6
Educational buildings	118 840	71 520	(NA)	47 320	6	8	(NA)	9
Hospitals and institutional buildings	116 011	83 903	(NA)	32 107	4	4	(NA)	7
Other nonresidential buildings	189 762	135 562	(NA)	54 203	14	12	(NA)	22
Nonbuilding construction	101 618	80 588	(NA)	21 030	4	4	(NA)	7
Construction work, n.s.k.	582 341	465 344	(NA)	116 996	3	3	(NA)	3

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.
²In 1982, data for additions, alterations, or reconstruction were collected separately for SIC 1521, 1522, 1531, 1541, and 1542. For all other industries, data are included with "New construction."

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work sub-contracted to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
All establishments -----	36 009	190 431	3 272 194	11 243 863	8 075 469	10 038 947	6 077 619	1 204 915	1	1	2
Establishments not specializing by type -----	4 712	32 650	613 315	2 132 102	(NA)	1 936 143	1 145 641	195 958	1	1	2
Establishments specializing 51 percent or more -----	31 297	157 781	2 658 878	9 111 760	8 075 469	8 102 803	4 931 978	1 008 956	2	2	4
SINGLE-FAMILY HOUSES, DETACHED											
All establishments specializing in type -----	18 804	84 272	1 393 019	4 974 019	4 392 090	4 476 269	2 641 593	497 749	1	1	3
Establishments with —											
100 percent specialization -----	10 957	43 411	644 838	2 384 921	2 384 921	2 080 251	1 260 264	304 670	2	2	5
90 to 99 percent specialization -----	2 850	13 874	222 446	805 519	753 342	742 031	419 668	63 488	4	4	8
80 to 89 percent specialization -----	1 843	8 307	152 032	528 161	433 776	480 397	278 623	47 764	4	5	13
70 to 79 percent specialization -----	1 310	7 976	162 516	535 304	390 308	495 296	292 277	40 007	4	3	7
60 to 69 percent specialization -----	1 396	7 469	136 680	492 354	304 184	461 184	250 298	31 170	4	4	8
51 to 59 percent specialization -----	446	3 233	74 505	227 757	125 556	217 108	140 461	10 649	5	4	9
SINGLE-FAMILY HOUSES, ATTACHED											
All establishments specializing in type -----	1 855	10 239	185 413	506 399	437 780	462 445	301 841	43 954	4	4	9
Establishments with —											
100 percent specialization -----	672	3 500	70 100	200 364	200 364	182 416	113 795	17 947	6	5	13
90 to 99 percent specialization -----	255	2 370	38 281	92 440	84 851	85 366	59 878	7 074	9	8	25
80 to 89 percent specialization -----	431	1 551	26 305	69 131	56 301	65 323	42 079	3 808	10	11	26
70 to 79 percent specialization -----	379	1 531	24 797	75 289	54 341	68 588	44 168	6 701	9	12	17
60 to 69 percent specialization -----	102	1 007	20 271	55 981	34 740	48 804	35 076	7 177	12	17	28
51 to 59 percent specialization -----	13	278	5 656	13 192	7 182	11 946	6 842	1 246	10	7	10
APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS											
All establishments specializing in type -----	1 439	11 165	191 605	587 551	512 990	498 073	325 495	89 478	3	4	7
Establishments with —											
100 percent specialization -----	721	4 194	72 452	231 387	231 387	188 589	124 805	42 798	5	6	13
90 to 99 percent specialization -----	158	2 603	40 242	133 587	122 857	115 054	67 832	18 533	8	7	9
80 to 89 percent specialization -----	33	957	19 251	53 435	44 089	48 553	32 156	4 882	11	17	28
70 to 79 percent specialization -----	409	1 749	30 290	90 159	65 163	75 575	54 570	14 584	8	7	7
60 to 69 percent specialization -----	98	1 558	27 856	75 534	47 687	68 015	43 353	7 519	7	10	21
51 to 59 percent specialization -----	*18	102	1 512	3 447	1 806	2 286	2 778	1 161	4	3	(W)
OTHER RESIDENTIAL BUILDINGS, EXCLUDING HOTELS AND MOTELS											
All establishments specializing in type -----	384	2 028	36 431	120 402	99 897	101 873	60 224	18 528	8	8	23
Establishments with —											
100 percent specialization -----	162	989	15 880	39 711	39 711	32 547	20 921	*7 164	12	17	57
90 to 99 percent specialization -----	*33	229	3 307	12 360	11 649	*10 501	7 958	*1 858	35	38	42
80 to 89 percent specialization -----	55	483	10 014	31 058	24 999	29 128	14 119	1 929	16	12	32
70 to 79 percent specialization -----	4	24	408	2 168	1 626	2 168	621	—	(W)	(W)	—
60 to 69 percent specialization -----	126	245	4 797	27 296	17 487	20 077	12 925	7 218	18	12	9
51 to 59 percent specialization -----	3	55	2 024	7 808	4 423	7 450	3 679	358	(W)	(W)	(W)
OFFICE BUILDINGS											
All establishments specializing in type -----	1 107	8 302	199 834	596 847	510 763	500 330	339 834	96 517	3	4	5
Establishments with —											
100 percent specialization -----	531	3 589	81 398	212 487	212 487	191 553	141 279	20 933	4	7	9
90 to 99 percent specialization -----	119	1 244	29 760	103 336	95 170	86 981	59 413	16 354	8	6	5
80 to 89 percent specialization -----	48	920	24 923	93 306	77 332	(D)	42 954	(D)	10	9	(D)
70 to 79 percent specialization -----	244	1 181	28 118	86 178	62 428	70 363	43 731	15 814	10	8	12
60 to 69 percent specialization -----	153	1 172	30 478	91 367	57 823	76 160	45 354	15 207	10	10	16
51 to 59 percent specialization -----	9	196	5 155	10 173	5 521	(D)	7 101	(D)	17	17	(D)
OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS											
All establishments specializing in type -----	1 335	9 240	192 117	661 159	576 612	566 977	353 877	94 181	3	5	8
Establishments with —											
100 percent specialization -----	479	4 797	102 321	335 516	335 516	294 978	183 757	40 537	5	8	12
90 to 99 percent specialization -----	145	755	17 349	64 680	60 225	54 935	34 484	9 744	13	12	18
80 to 89 percent specialization -----	231	1 002	18 016	83 530	68 659	63 634	37 653	19 895	11	12	16
70 to 79 percent specialization -----	117	799	15 702	52 493	37 706	47 802	31 494	4 691	8	5	8
60 to 69 percent specialization -----	282	1 364	29 118	87 577	53 356	73 457	45 677	14 120	9	10	26
51 to 59 percent specialization -----	79	520	9 608	37 361	21 148	32 168	20 810	5 192	18	14	31
INDUSTRIAL BUILDINGS											
All establishments specializing in type -----	222	2 563	57 939	205 500	169 924	180 799	105 526	24 701	7	6	7
Establishments with —											
100 percent specialization -----	80	857	19 059	74 642	74 642	59 948	36 042	14 693	10	7	6
90 to 99 percent specialization -----	*18	279	7 044	21 491	19 745	20 431	14 213	1 059	18	17	26
80 to 89 percent specialization -----	33	459	11 828	33 929	27 478	30 207	18 431	3 722	10	13	18
70 to 79 percent specialization -----	30	282	5 512	22 432	16 634	20 222	9 934	*2 209	26	23	50
60 to 69 percent specialization -----	40	511	11 332	40 092	24 274	37 351	21 912	2 740	16	13	30
51 to 59 percent specialization -----	*20	172	3 161	12 911	7 149	12 636	4 992	*275	38	38	46

Table 9. Quarterly Construction Worker Hours and Employment for Establishments With

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers ¹	Hours worked (thousands)	Construction workers ¹	Hours worked (thousands)
	A	B	C	D	E	F	G
United States	38 009	164 191	252 984	152 637	56 433	166 772	63 953
Alabama	381	983	1 624	927	363	987	400
Alaska	49	(S)	(S)	(S)	(S)	(S)	(S)
Arizona	487	4 514	7 286	4 501	1 634	4 885	2 049
Arkansas	213	581	974	571	223	602	252
California	2 836	29 230	42 181	27 372	9 464	28 792	10 516
Colorado	559	1 794	2 570	1 391	508	2 139	670
Connecticut	1 075	4 178	7 027	3 927	1 558	4 309	1 743
Delaware	94	378	566	365	134	399	152
District of Columbia	11	93	133	87	30	92	33
Florida	2 043	9 320	15 185	9 030	3 498	9 433	3 884
Georgia	787	6 813	6 895	6 225	1 536	6 874	1 722
Hawaii	75	436	821	464	118	446	138
Idaho	106	253	473	202	*86	229	*115
Illinois	1 532	9 768	15 535	8 626	3 472	9 998	3 959
Indiana	760	2 727	4 375	2 472	1 001	2 712	1 057
Iowa	369	865	1 333	765	298	835	349
Kansas	341	1 238	1 702	1 097	322	1 246	445
Kentucky	351	1 193	1 942	1 140	445	1 175	476
Louisiana	244	684	1 016	705	223	766	296
Maine	481	1 452	2 483	1 304	553	1 351	595
Maryland	953	5 081	8 775	4 721	2 027	5 347	2 303
Massachusetts	1 672	5 774	9 455	5 764	2 306	5 823	2 335
Michigan	1 177	5 755	9 401	4 956	2 003	5 906	2 384
Minnesota	709	3 090	5 016	2 570	1 048	3 202	1 250
Mississippi	238	621	1 104	556	226	626	261
Missouri	736	3 708	5 850	3 226	1 221	4 016	1 585
Montana	165	389	534	262	98	420	136
Nebraska	250	711	1 161	659	258	722	299
Nevada	152	1 511	2 245	1 472	510	1 500	561
New Hampshire	555	1 607	2 219	1 374	451	1 477	489
New Jersey	1 971	6 711	10 382	6 316	2 336	6 728	2 593
New Mexico	102	365	511	263	99	392	134
New York	3 119	12 375	20 270	11 236	4 424	12 756	5 090
North Carolina	1 228	3 861	5 412	3 761	1 193	3 780	1 347
North Dakota	139	333	462	296	109	357	128
Ohio	1 385	5 478	8 785	4 896	1 957	5 517	2 148
Oklahoma	222	699	1 022	746	260	714	262
Oregon	338	984	1 427	922	314	1 007	364
Pennsylvania	1 938	7 232	11 909	6 451	2 529	7 454	3 018
Rhode Island	289	950	1 546	859	327	932	395
South Carolina	461	1 662	2 726	1 612	671	1 727	709
South Dakota	129	355	657	328	100	390	196
Tennessee	489	2 132	3 595	2 178	839	2 238	914
Texas	1 511	5 190	7 684	5 709	1 955	5 315	1 959
Utah	174	513	801	402	145	507	178
Vermont	224	670	1 179	591	255	625	267
Virginia	1 197	5 167	8 084	4 851	1 807	5 168	2 008
Washington	694	2 062	2 622	1 894	579	2 034	668
West Virginia	136	361	586	343	125	351	153
Wisconsin	795	2 157	3 409	1 920	738	2 277	895
Wyoming	44	(S)	(S)	(S)	(S)	(S)	(S)

¹Construction workers during pay periods including 12th of March, May, August, and November.

Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column--										Location of establishment
Construction workers¹	Hours worked (thousands)	Construction workers¹	Hours worked (thousands)											
H	I	J	K	B	C	D	E	F	G	H	I	J	K	
176 368	69 202	161 054	63 393	1	1	1	1	1	1	1	1	1	1	U.S.
1 018 (S)	424 (S)	1 001 (S)	436 (S)	11 (S)	15 (S)	11 (S)	15 (S)	11 (S)	16 (S)	10 (S)	13 (S)	15 (S)	19 (S)	AL
4 601	1 910	4 073	1 691	4	5	4	5	3	5	5	6	5	7	AK
643	279	511	218	25	27	27	28	25	27	26	27	22	26	AZ
31 105	11 470	29 653	10 728	2	2	3	3	2	2	2	3	2	2	AR
1 856	704	1 796	687	8	10	8	10	13	11	8	10	11	14	CA
4 430	1 907	4 047	1 817	5	7	5	7	5	7	5	7	5	8	CO
391	149	358	130	11	21	11	22	11	22	12	21	12	20	CT
92	34	102	35	(W)	13	(W)	11	(W)	13	(W)	12	(W)	15	DE
9 777	4 067	9 040	3 735	3	5	4	5	4	5	4	5	4	5	DC
7 135	1 882	7 018	1 753	3	6	3	7	3	6	4	7	3	6	FL
415	182	417	182	13	10	24	9	19	7	8	9	12	16	GA
349	156	235	114	28	38	31	43	28	41	30	39	26	34	HI
10 587	4 214	9 672	3 888	2	3	2	4	2	3	3	3	2	4	ID
2 964	1 162	2 760	1 154	8	11	8	12	8	11	8	10	9	12	IL
965	370	894	314	9	11	9	11	10	12	10	13	10	12	IA
1 427	522	1 184	411	9	13	9	13	9	12	9	13	11	15	KS
1 256	536	1 199	483	9	10	9	10	9	10	10	12	10	11	KY
711	267	552	227	11	19	12	16	14	21	15	24	13	22	LA
1 628	691	1 526	642	7	9	8	10	8	10	6	9	7	9	ME
5 355	2 268	4 900	2 176	4	5	4	5	4	5	4	5	4	5	MD
5 990	2 504	5 521	2 308	4	5	7	8	4	5	4	5	4	5	MA
6 511	2 704	5 650	2 309	3	5	4	6	4	5	4	6	4	6	MI
3 430	1 483	3 163	1 233	7	9	8	10	7	9	7	9	7	9	MN
693	335	610	280	16	21	15	22	15	20	18	26	17	21	MS
4 083	1 633	3 508	1 408	5	7	5	7	5	7	5	6	5	7	MO
483	169	398	130	10	14	14	19	13	13	10	15	16	17	MT
784	331	679	271	11	13	11	13	12	14	10	13	12	15	NE
1 579	609	1 491	563	5	9	5	10	6	10	10	13	4	9	NV
1 826	639	1 751	638	6	8	6	10	7	10	7	8	6	9	NH
7 280	2 827	6 521	2 624	3	4	4	5	3	4	3	4	3	5	NJ
456	149	349	127	18	20	14	17	18	20	21	23	23	25	NM
13 285	5 534	12 233	5 222	2	3	2	3	2	3	3	3	3	4	NY
4 186	1 503	3 718	1 366	6	8	7	8	7	9	6	9	8	9	NC
372	115	306	107	18	21	20	23	19	22	16	21	19	20	ND
5 923	2 362	5 576	2 316	4	6	4	6	4	6	4	8	4	6	OH
689	255	646	243	9	14	10	13	10	14	9	13	9	16	OK
1 020	400	985	348	10	15	10	16	10	14	11	16	10	16	OR
8 120	3 342	6 902	3 019	4	5	4	5	4	5	4	5	4	5	PA
1 005	415	1 005	407	7	8	8	8	7	9	8	9	12	11	RI
1 709	696	1 599	648	9	11	9	11	9	11	9	11	11	14	SC
431	220	274	139	28	32	35	30	31	35	29	37	20	29	SD
2 074	938	2 038	902	9	12	10	12	9	12	9	12	10	13	TN
5 229	2 031	4 507	1 737	5	6	5	6	5	6	5	7	5	6	TX
568	238	576	239	15	18	16	19	15	17	15	19	20	24	UT
789	339	675	316	14	18	16	19	17	18	14	17	15	20	VT
5 846	2 287	4 802	1 980	5	6	5	6	5	6	6	6	5	7	VA
2 297	705	2 024	669	6	8	6	9	7	8	7	8	6	9	WA
407	162	345	144	11	13	11	10	12	14	12	13	12	17	WV
2 354	979	2 082	796	6	7	7	9	7	8	6	7	6	7	WI
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	WY

Table 10. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987					1982 construction receipts for work done in this State¹	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column—		
	Value of construction work done in this State¹	Construction work done by establishments located in this State		Construction work done by establishments not located in this State						
		Number	Value of construction work	Number	Value of construction work					
A	B	C	D	E	F	G	A	C	E	
United States -----	11 243 863	35 503	10 644 016	5 074	599 845	5 451 191	106.3	1	1	4
Alabama -----	50 381	378	39 542	172	10 839	35 731	41.0	9	11	14
Alaska -----	6 835	41	(D)	*10	(D)	22 820	-70.0	25	(D)	(D)
Arizona -----	364 078	487	353 353	49	10 724	136 939	165.9	3	3	8
Arkansas -----	26 717	212	22 872	95	*3 845	13 722	94.7	18	18	59
California -----	2 199 259	2 834	2 186 749	56	12 510	700 761	213.8	2	2	2
Colorado -----	159 484	559	154 860	30	4 623	118 389	34.7	12	12	11
Connecticut -----	291 210	1 053	274 600	190	16 610	100 264	190.4	5	5	12
Delaware -----	25 001	91	21 604	56	3 396	22 977	8.8	13	14	32
District of Columbia -----	29 069	11	3 687	231	25 382	15 818	83.8	4	(W)	4
Florida -----	583 775	2 035	523 450	134	60 324	274 689	112.5	3	3	6
Georgia -----	224 513	781	161 436	144	63 077	83 299	169.5	8	7	21
Hawaii -----	45 017	75	(D)	4	(D)	45 728	-1.6	11	(D)	(D)
Idaho -----	13 701	105	12 354	11	1 347	17 977	-23.8	14	15	3
Illinois -----	820 900	1 528	808 356	177	12 543	340 243	141.3	3	3	18
Indiana -----	164 304	747	156 152	119	8 141	73 391	123.9	8	9	8
Iowa -----	88 887	389	83 533	67	3 333	85 684	.3	10	10	30
Kansas -----	74 550	341	80 238	218	14 312	35 097	112.4	8	9	18
Kentucky -----	87 930	348	55 827	120	12 102	48 825	39.7	8	10	13
Louisiana -----	84 508	244	55 883	83	8 845	181 970	-80.2	11	13	2
Maine -----	100 295	482	98 658	38	3 738	42 188	137.7	9	9	10
Maryland -----	257 784	928	240 099	129	17 885	122 281	110.8	4	4	19
Massachusetts -----	442 343	1 826	427 124	198	15 218	183 604	170.5	4	4	7
Michigan -----	402 788	1 167	394 923	178	7 844	161 236	186.3	4	4	21
Minnesota -----	195 519	700	193 658	39	1 883	108 171	80.7	5	6	29
Mississippi -----	32 467	229	23 200	123	9 267	25 921	25.3	12	15	19
Missouri -----	218 488	726	206 254	133	12 233	111 278	96.3	5	6	13
Montana -----	36 274	157	36 003	7	270	23 109	57.0	14	14	14
Nebraska -----	44 306	250	42 703	47	1 603	42 838	3.4	14	14	29
Nevada -----	102 966	147	96 721	59	6 245	43 349	137.5	7	7	13
New Hampshire -----	105 616	540	87 381	111	*18 235	28 673	268.3	10	8	43
New Jersey -----	498 441	1 925	470 591	208	27 849	206 554	141.3	3	3	9
New Mexico -----	17 417	89	15 666	73	1 750	33 696	-48.3	21	23	33
New York -----	993 093	3 046	944 446	204	48 646	480 555	106.7	3	3	9
North Carolina -----	187 169	1 217	181 259	104	5 910	83 495	124.2	7	7	14
North Dakota -----	20 979	139	19 351	10	1 627	12 710	65.1	19	20	36
Ohio -----	360 057	1 372	346 212	166	13 845	191 139	88.4	4	4	14
Oklahoma -----	46 937	222	44 522	38	2 414	76 461	-38.6	9	9	26
Oregon -----	59 235	335	58 560	13	674	33 830	75.1	9	9	27
Pennsylvania -----	492 209	1 902	464 269	274	27 940	235 391	109.1	5	5	10
Rhode Island -----	82 302	273	77 496	83	4 806	14 426	470.5	10	11	15
South Carolina -----	80 420	437	74 714	82	5 706	47 765	68.4	9	10	17
South Dakota -----	21 918	129	21 753	7	165	14 945	46.7	32	32	(W)
Tennessee -----	113 570	480	104 357	105	9 212	51 461	120.7	13	14	20
Texas -----	337 035	1 511	328 167	185	8 868	395 311	-14.7	8	8	14
Utah -----	37 158	166	35 877	14	1 281	20 920	77.6	16	17	23
Vermont -----	52 625	217	37 620	66	15 005	16 727	214.6	11	13	23
Virginia -----	289 951	1 189	250 300	245	39 651	115 401	151.3	5	6	6
Washington -----	145 535	693	140 096	44	5 438	75 681	92.3	6	6	32
West Virginia -----	22 161	133	17 403	41	4 758	20 716	7.0	13	16	2
Wisconsin -----	165 006	789	161 103	92	3 903	123 651	33.4	6	6	13
Wyoming -----	3 715	44	3 637	*5	*77	22 656	-83.6	22	22	51

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 11. Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done ¹		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
All kinds of business.....	11 452 175	5 512 195	1	1
General building contractor	72 722	85 364	10	6
Operative builder	14 475	8 552	17	17
Residential remodeling contractor	25 245	104 821	12	5
Plumbing contractor	9 099	33 257	24	5
Painting construction	30 564	34 335	15	6
Electrical contractor	10 439	32 313	21	7
Drywall contractor	33 774	29 211	8	5
Carpentry contractor	9 134 082	4 652 096	1	1
Garage door installation contractor	868 410	(NA)	4	(NA)
Siding contractor	30 438	19 406	16	10
Concrete construction	39 471	102 676	11	3
Other construction activities	412 683	(S)	10	(S)
Manufacturing	24 988	10 647	6	9
Retail trade	57 661	24 329	8	8
Wholesale trade	35 082	10 025	9	10
Other activities	90 718	(S)	5	(S)
Kind of business activity, n.s.k.	562 324	(S)	6	(S)

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 12. Selected Industry Ratios for Establishments With Payroll: 1987 and 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	1987	1982	Relative standard error of estimate (percent) for 1987
AVERAGE PER ESTABLISHMENT			
Number of employees**	5.3	4.3	1
Number of construction workers	4.6	3.8	1
Number of all other employees	.7	(NA)	1
Payroll, all employees	90.9	52.4	1
Payroll, construction workers	72.5	44.0	1
Payroll, other employees	18.4	8.4	1
Dollar value of business done	318.0	179.2	1
Value of construction work ¹	312.3	177.2	1
Cost of materials, components, supplies, and fuels	115.8	61.5	1
Construction work subcontracted to others	33.5	22.5	2
Rental cost for machinery, equipment, and buildings	3.1	1.7	2
Capital expenditures, other than land	4.1	2.4	3
Gross book value of depreciable assets	23.7	21.9	2
AVERAGE PER EMPLOYEE			
Payroll, all employees	17.2	12.2	(W)
Dollar value of business done	60.1	41.6	1
Value added††	31.9	22.1	1
AVERAGE PER CONSTRUCTION WORKER			
Payroll, construction workers	15.9	11.6	(W)
Value of construction work ¹	68.5	46.6	1
Construction worker hours	1 540.8	1 356.4	1
AVERAGE PER OTHER EMPLOYEE			
Payroll, other employees	25.2	(NA)	1
AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK¹			
Payroll, all employees	.291	.296	1
Cost of materials, components, supplies, and fuels	.371	.347	1
Cost of construction work subcontracted to others	.107	.127	2
Rental cost for machinery, equipment, and buildings	.010	.009	2

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee (\$1,000)	Construction worker hours per construction worker	Value of construction work per construction worker (\$1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings
United States -----	5.3	17.2	1 540.8	68.5	.291	.371	.107	.010
Alabama -----	3.0	11.4	1 652.1	43.2	.307	.384	.092	.006
Alaska -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Arizona -----	10.8	19.6	1 614.1	78.6	.290	.472	.056	.013
Arkansas -----	3.0	10.2	1 676.4	41.8	.269	.341	.118	.009
California -----	11.7	19.9	1 443.1	78.1	.290	.395	.076	.014
Colorado -----	3.9	14.1	1 432.6	86.6	.200	.430	.161	.012
Connecticut -----	4.6	17.8	1 681.9	69.7	.301	.339	.133	.009
Delaware -----	4.6	15.1	1 497.4	64.3	.272	.291	.171	.007
District of Columbia -----	9.6	17.1	1 430.1	49.7	.392	.259	.251	.007
Florida -----	5.2	15.1	1 629.3	57.0	.304	.383	.095	.012
Georgia -----	9.5	7.5	1 012.0	25.5	.325	.369	.089	.014
Hawaii -----	6.8	24.8	1 424.3	97.8	.296	.360	.129	.009
Idaho -----	2.8	11.6	1 869.6	63.5	.214	.394	.062	*.020
Illinois -----	7.4	22.9	1 590.4	84.0	.315	.344	.101	.007
Indiana -----	4.3	13.9	1 604.3	60.7	.274	.352	.126	.006
Iowa -----	2.8	12.9	1 541.0	77.5	.201	.387	.120	.011
Kansas -----	4.2	14.0	1 374.8	51.8	.312	.339	.110	.006
Kentucky -----	3.9	13.5	1 627.8	50.9	.302	.364	.084	.008
Louisiana -----	3.6	14.7	1 485.4	85.3	.221	.360	.094	.008
Maine -----	3.4	13.7	1 710.1	69.8	.219	(D)	.135	.003
Maryland -----	6.3	17.2	1 727.0	59.7	.342	.318	.136	.010
Massachusetts -----	4.0	17.9	1 637.5	76.4	.272	.362	.149	.009
Michigan -----	5.7	19.3	1 633.5	70.3	.321	.378	.084	.007
Minnesota -----	5.1	17.4	1 623.3	64.1	.319	.366	.117	.010
Mississippi -----	3.0	11.1	1 777.8	43.7	.295	.377	.070	.009
Missouri -----	5.8	19.1	1 577.7	62.5	.355	.376	.083	.009
Montana -----	2.8	13.9	1 372.8	96.0	.169	.255	.306	.003
Nebraska -----	3.5	12.7	1 632.9	66.6	.235	.494	.073	.008
Nevada -----	11.1	16.1	1 485.8	64.6	.278	.436	.065	.012
New Hampshire -----	3.5	15.3	1 380.8	62.5	.292	.340	.131	.007
New Jersey -----	4.0	19.2	1 547.0	78.2	.287	.331	.131	.010
New Mexico -----	4.1	11.9	1 400.0	47.0	.290	.647	.154	*.031
New York -----	4.6	21.0	1 638.0	78.7	.312	.356	.117	.008
North Carolina -----	3.6	12.7	1 401.7	52.7	.278	.344	.108	.008
North Dakota -----	2.8	8.5	1 387.4	58.8	.167	.477	.095	*.006
Ohio -----	4.6	16.1	1 603.7	66.9	.283	.383	.118	.007
Oklahoma -----	3.8	14.1	1 462.1	64.1	.267	(D)	.139	.007
Oregon -----	3.6	13.8	1 450.2	60.3	.280	.320	.087	.012
Pennsylvania -----	4.4	16.0	1 646.7	69.4	.269	.360	.155	.010
Rhode Island -----	3.8	18.5	1 627.4	85.6	.248	.341	.139	.007
South Carolina -----	4.1	12.1	1 640.2	49.6	.276	.313	.105	.008
South Dakota -----	3.0	9.9	1 850.7	61.9	.174	.364	*.146	.003
Tennessee -----	4.9	13.1	1 686.2	55.8	.266	.365	.101	.011
Texas -----	4.1	14.4	1 480.5	66.4	.257	.341	.121	.007
Utah -----	3.4	13.5	1 561.4	71.3	.221	.389	.121	*.013
Vermont -----	3.4	13.6	1 759.7	78.4	.199	.381	.229	.004
Virginia -----	5.0	15.2	1 564.5	56.0	.314	.378	.108	.013
Washington -----	3.6	16.7	1 271.6	69.6	.290	.338	.100	.010
West Virginia -----	2.9	14.8	1 623.3	51.3	.319	.393	.052	.006
Wisconsin -----	3.2	16.4	1 580.4	76.0	.256	.399	.118	.008
Wyoming -----	(S)	(S)	(S)	(S)	(S)	(D)	(S)	(S)

APPENDIX A.

Explanation of Terms

Construction—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

Number of establishments in business during year—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

Proprietors and working partners—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

All employees—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

Construction workers—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

Other employees—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

Construction worker hours—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

Payroll—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

Employer costs for fringe benefits (supplemental labor costs)—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

Legally required contributions—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

Voluntary payments—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

Value of construction work done—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.

Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

Land receipts—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

Other business receipts—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

Net value of construction work—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Value added—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Selected costs—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

Rental costs for machinery, equipment, and buildings—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It

excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

Selected purchased services—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

Assets and depreciation—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

Capital expenditures—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

Inventories—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

Ownership of construction projects—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

Value of construction work subcontracted in from others—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

Types of construction—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e, office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.

- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.

APPENDIX B.

Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles	SIC code	Industry titles
15	BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS	17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.
152	General Building Contractors—Residential Buildings	173	Electrical Work Special Trade Contractors
1521	General Contractors—Single-Family Houses	1731	Electrical Work Special Trade Contractors
1522	General Contractors—Residential Buildings, Other Than Single-Family	174	Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors
153	Operative Builders	1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1531	Operative Builders	1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
154	General Building Contractors—Nonresidential Buildings	1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
1541	General Contractors—Industrial Buildings and Warehouses	175	Carpentry and Floor Work Special Trade Contractors
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses	1751	Carpentry Work Special Trade Contractors
16	HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS	1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
161	Highway and Street Construction, Except Elevated Highways	176	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
1611	Highway and Street Construction Contractors, Except Elevated Highways	1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
162	Heavy Construction, Except Highway and Street Construction	177	Concrete Work Special Trade Contractors
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors	1771	Concrete Work Special Trade Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction	178	Water Well Drilling Special Trade Contractors
1629	Heavy Construction, Not Elsewhere Classified	1781	Water Well Drilling Special Trade Contractors
17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS	179	Miscellaneous Special Trade Contractors
171	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1791	Structural Steel Erection Special Trade Contractors
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1793	Glass and Glazing Work Special Trade Contractors
172	Painting and Paper Hanging Special Trade Contractors	1794	Excavation Work Special Trade Contractors
1721	Painting and Paper Hanging Special Trade Contractors	1795	Wrecking and Demolition Work Special Trade Contractors
		1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
		1799	Special Trade Contractors, Not Elsewhere Classified
		6552	LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES

APPENDIX C.

Geographic Divisions and States

NEW ENGLAND STATES

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC STATES

New Jersey
New York
Pennsylvania

EAST NORTH CENTRAL STATES

Illinois
Indiana
Michigan
Ohio
Wisconsin

WEST NORTH CENTRAL STATES

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

SOUTH ATLANTIC STATES

Delaware
District of Columbia
Florida
Georgia
Maryland

SOUTH ATLANTIC STATES—Con.

North Carolina
South Carolina
Virginia
West Virginia

EAST SOUTH CENTRAL STATES

Alabama
Kentucky
Mississippi
Tennessee

WEST SOUTH CENTRAL STATES

Arkansas
Louisiana
Oklahoma
Texas

MOUNTAIN STATES

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

PACIFIC STATES

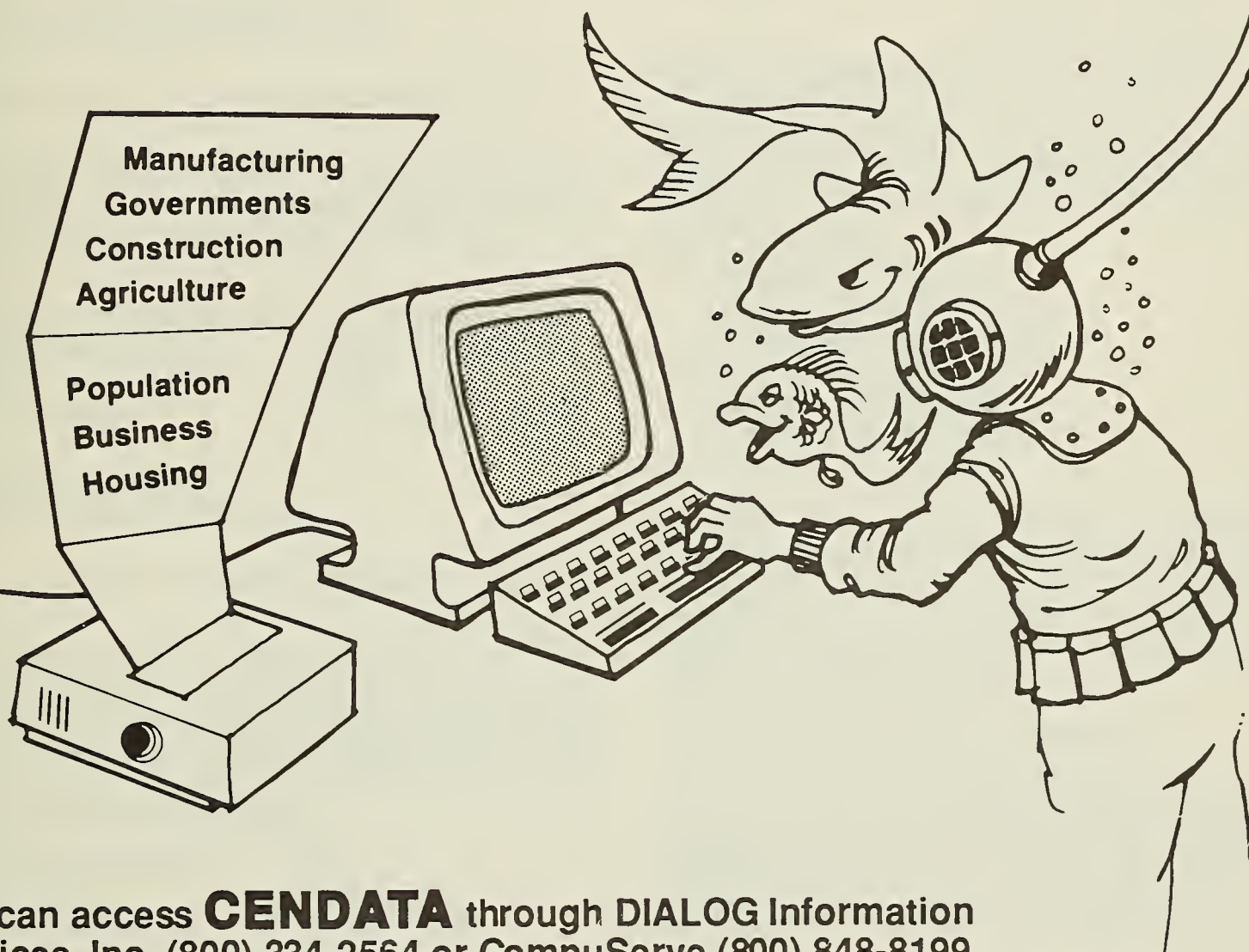
Alaska
California
Hawaii
Oregon
Washington

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PUBLICATION PROGRAM

1987 CENSUS OF CONSTRUCTION INDUSTRIES

The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

- Printed reports [P]
- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

Final Industry Series (CC87-I-1 through CC87-I-28)

(Available June 1989 through November 1989) [P] [C] [T] [+]

Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

- Capital expenditures
- Inventories
- Industry profiles
- Assets
- Depreciation
- And much more

Geographic Area Series (CC87-A-1 through CC87-A-10)

(Available January 1990 through March 1990) [P] [C] [T] [+]

Nine reports on the construction industries, representing each census geographic division, and a United States summary report. Regional reports provide detailed data for States and metropolitan statistical areas.

Subject Report—Legal Form of Organization and Type of Operation (CC87-S-1)

(Available May 1990) [P]

One report providing selected national statistics for each industry by legal form of organization and type of operation. This report includes data for establishments with and without payroll. Data in this report include—

- Employment
- Payroll
- Value of construction work done
- Selected operating costs

OTHER ECONOMIC CENSUSES REPORTS

The Census of Construction Industries is part of the 1987 Economic Censuses. These are conducted at five-year intervals in years ending in 2 and 7 and consist of seven separate censuses:

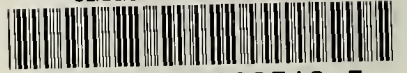
- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction

...plus several related programs: enterprise statistics; information on minority-owned and women-owned businesses; and the Census of Outlying Areas, including separate economic censuses of Puerto Rico and other outlying areas. The Census of Agriculture and Census of Governments are conducted separately.

HOW TO ORDER DATA PRODUCTS

Order forms for the specific reports and other data products may be obtained from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233. If you have any questions, call Census Customer Services 1-(301)-763-4100.

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CC87-I-16

Carpentry Work Special Trade Contractors

1987 Census of C

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